

EXECUTIVE DIRECTOR'S REMARKS

Welcome to the December edition of the Infectious Diseases Research Collaboration (IDRC) newsletter! As we conclude 2024, I am delighted to reflect on our accomplishments and share what lies ahead for the Infectious Diseases Research Collaboration (IDRC). This year showcased the strength of collaboration, research, and innovation in addressing pressing health challenges in Uganda and beyond.

Since our last newsletter in July, we've celebrated key milestones. The Young Investigators Research Symposium spotlighted promising scientists presenting innovative studies in HIV, malaria, and maternal health, affirming our commitment to nurturing future researchers. The Malaria Research to Policy Dissemination Meeting emphasised innovative strategies to address drug resistance, improve diagnostics, and enhance prevention. Similarly, the SEARCH SAPPHIRE Stakeholder Engagement Meeting demonstrated the transformative impact of community-centred approaches in HIV prevention and hypertension care.

This issue features a photo collage of cherished memories since July and previews exciting initiatives for 2025, further showcasing our commitment to impactful research and collaboration.

As we celebrate this year's successes, I thank our dedicated board members, senior management team, and staff, our most incredible resource, partners, funders, collaborators, and supporters, for their dedication. Wishing you a Merry Christmas and a Happy New Year filled with joy, peace, and renewed purpose.



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YOUNG INVESTIGATORS RESEARCH SYMPOSIUM SHOWCASES CUTTING-EDGE STUDIES



The Infectious Diseases Research Collaboration (IDRC) hosted the Young Investigators Research Symposium on July 10, 2024. The symposium brought together budding researchers and seasoned scientists to present their insightful studies. Emphasising the importance of fostering a new generation of researchers, it featured a range of compelling studies across various fields.

IDRC Executive Director Professor Moses Kamya expressed his delight at the gathering in his opening remarks. He emphasised the significance of nurturing young talent in research, commended young and senior scientists, and noted mentors' crucial role in shaping future researchers. Professor Kamya also thanked the organising committee for orchestrating the successful symposium.

The first session of the symposium was on tuberculosis and HIV. Dr William Worodria, chairing the session on TB/HIV, set the tone for the session alongside Ms Jane Kabami, who presented a study on improving viral suppression among pregnant and postpartum women in sub-Saharan Africa. Jane's research aimed to enhance HIV suppression rates through targeted interventions like enhanced screening for sexually transmitted infections (STI), counselling, and postpartum support.



In her presentation, Ms Cecilia Akatukwasa illuminated stakeholder perspectives regarding a community-based peer-delivery of pre-exposure prophylaxis (PrEP) intervention for sex workers in Uganda. The study focused on overcoming barriers such as stigma and limited PrEP uptake service among vulnerable populations.

Dr Mucunguzi Atukunda shared insights on an Integrated HIV/ Hypertension (HTN) care model's impact on reducing blood pressure among adults with HIV in Uganda. The study highlighted the positive outcomes of the integrated care approach in managing hypertension among people living with HIV.



Florence Mwangwa discussed the SEARCH-Youth intervention and its efficacy in alleviating depression symptoms among young people living with HIV in western Uganda. The multi-component intervention showed promising results in addressing mental health challenges among youth living with HIV.

Session Two of the symposium was on Malaria Molecular Surveillance and was chaired by Dr Isaac Ssewanyana and Jessica Briggs. The first presentation was by Dr Diana Kisakye, who presented findings from an evaluation of rapid diagnostic tests for malaria diagnosis and the prevalence of pfhrp2/pfhrp3 deletions in Uganda. Her research underscored the importance of accurate diagnostic tools in malaria control and surveillance efforts.

Mr Thomas Katairo compared the performance of Molecular Inversion Probes and the MAD4HaTeR Amplicon Sequencing Panel in detecting Plasmodium falciparum mutations associated with antimalarial drug resistance. The study highlighted the strengths and nuances of each genotyping method, providing valuable insights for malaria molecular research.

Drs Sam Nsobya and Melissa Conrad chaired the third session, which was on drug resistance. Dr Stephen Tukwasibwe captivated the audience with his presentation on the prevalence of drug-resistance mutations among new refugees in Uganda. He emphasised the importance of surveillance to combat emerging drug resistance, especially in conflict zones where routine monitoring is challenging.

Dr Tukwasibwe's study highlighted the diverse genetic mutations associated with antimalarial drug resistance in different refugee populations, shedding light on the varying resistance patterns in various regions. Through collaborations with the United Nations High Commissioner for Refugees (UNHCR), the research team conducted comprehensive surveys to identify and monitor the prevalence of these mutations, paving the way for early detection, effective intervention strategies, and continuous surveillance.



Jane Kabami and Cecilia Akatukwasa present impactful research at the Young Investigators Research Symposium, highlighting peer mentorship for HIV prevention and multi-component interventions improving viral suppression in pregnant and postpartum women.



Dr Mucunguzi Atukunda presented at the Young Investigators Research Symposium, showcasing integrated HIV/HTN care models reducing blood pressure in adults with HIV.



In the subsequent session on Immunology, speakers like Mr Kenneth Musinguzi, Ms Felistas Nankya, Ms Nora Yang, and Dr Irene Bagala delved into diverse aspects of immune responses, providing valuable insights into malaria prevention and immune profiles associated with protection against the disease. Their research offered promising avenues for developing strategies to enhance further research on malaria vaccine candidates.

Turning the spotlight on maternal child health, researchers like Drs Martha Nassali, Miriam Aguti, Jimmy Kizza, and Carol Kamy presented studies addressing crucial issues such as malaria burden in infants, pregnancy dating discrepancies, and the cost-effectiveness of malaria chemoprevention. Their work highlighted the importance of innovative interventions to improve maternal and child health outcomes in malaria-endemic regions.

During the Young Investigators Research Symposium, leading experts and emerging scientists gathered to share innovative research in drug resistance, immunology, and maternal child health. The symposium featured engaging discussions and sessions highlighting the latest advances in understanding and combating malaria, a pressing health concern in Uganda.

The symposium concluded with an awards ceremony honouring outstanding research contributions. Professor Moses Kamy commended the researchers for their dedication and innovative findings in the fight against malaria. Dr Stephen Tukwasibwe was awarded the Distinguished Scholar Award for his exceptional contributions to malaria research spanning drug resistance and immunology domains. The New Investigator Award was also presented to Mr Thomas Katairo, recognising his promising research in malaria genomics. The awards underscored the exceptional talent and commitment of young researchers shaping the future of malaria research and public health initiatives.

As the symposium ended, the organisers thanked all participants for their invaluable contributions and collaboration in advancing scientific knowledge and strategies to combat malaria effectively. The event stood as a testament to the collective effort and dedication towards overcoming the challenges posed by malaria and improving global health outcomes.



At the top, Thomas Katairo is celebrated as the recipient of the Prestigious New Investigator Award. Below, Dr Stephen Tukwasibwe proudly receives the Distinguished Scholar Award



Professors Moses Kamy and Grant Dorsey engage in insightful open feedback sessions with participants at the Young Investigators Research Symposium, fostering collaboration and innovation among emerging researchers

Innovative Strategies in Highlighted at IDRC's 5th Malaria Research to Policy Dissemination Meeting

On July 11, 2024, the Infectious Diseases Research Collaboration (IDRC) hosted its 5th Malaria Research to Policy Dissemination Meeting at Protea Hotel in Kampala. This impactful gathering brought together researchers, policymakers, and health professionals to share findings, discuss challenges and strategize actionable policies to combat malaria.

Prof Moses Kanya, Executive Director of IDRC, opened the event by addressing the pressing challenges in malaria control. "Since 2015, progress has stalled and, in some regions, reversed. This is a pivotal moment to rethink our strategies, leverage data, and tailor interventions to meet the needs of affected communities," he emphasised.

The meeting featured a series of expert presentations across key themes, offering new insights into malaria control. Deputy Executive Director of IDRC, Dr Joaniter Nankabirwa, presented findings from the Uganda Housing Modification Study, highlighting how improved housing could significantly reduce malaria transmission. "By preventing mosquito entry, we can complement existing interventions like insecticide-treated nets," she explained.

Professor Moses Kanya presented critical findings on the resurgence of malaria in Eastern Uganda after seven years of intensive vector control interventions. Highlighting data from Tororo District, which had previously achieved a dramatic reduction in malaria burden through repeated IRS and universal LLIN distribution, Prof Kanya revealed a worrying trend. "The resurgence of malaria, particularly with the rise of *Anopheles funestus* as the primary vector, underscores the fragility of our progress," he explained. He emphasised the need for proactive measures, including timely surveillance and adaptive vector control strategies, to sustain gains and prevent future setbacks in malaria control.

Dr Samuel Gonahasa discussed evaluations of long-lasting insecticidal nets (LLINs), emphasising their initial effectiveness but reduced long-term protection. "Embedding LLIN evaluations into national campaigns is critical for sustained impact," he noted.

Dr Abel Kakuru presented promising results on malaria prevention in pregnant women, comparing the efficacy of sulfadoxine-pyrimethamine, dihydroartemisinin-piperaquine, and their combination. "Our study demonstrates the potential for innovative preventive approaches to improve maternal and infant health," he said.

Dr Diana Kisakye Kabbale provided an in-depth analysis of histidine-rich protein 2 (HRP2)-based rapid diagnostic tests (RDTs) in Uganda. She noted, "Our findings confirm the high sensitivity of these tests, but additional investigations are needed for febrile cases post-treatment to maintain diagnostic reliability."



Participants of IDRC's 5th Malaria Research to Policy Dissemination Meeting (above) pose for a group photo, while the organising committee and presenters (below) gather for a photo.



Professor Moses Kanya, Executive Director at IDRC, offers guidance and support to presenters during the Malaria Research to Policy Dissemination Meeting, fostering an environment of collaboration and innovation.



Thomas Katairo highlighted the emergence of antimalarial drugs resistance markers, stressing, “Sustained molecular surveillance is vital to monitor and address resistance trends.” Similarly, Dr Martin Okitwi explored changes in antimalarial drugs efficacy, observing a worrying decrease in lumefantrine susceptibility in some regions.

Dr Chris Ebong shared findings on the effectiveness of various antimalarial regimens, revealing that while Artemether-Lumefantrine’s efficacy is diminishing, Dihydroartemisinin-Piperaquine (DP) and Artesunate-Amodiaquine (AS-AQ) remain above the WHO threshold of 90%. “Proactive measures are needed to counteract resistance and maintain drug efficacy,” he recommended.

In a poignant presentation, Miriam Aguti shed light on the high malaria burden among infants in Uganda, calling for additional interventions to protect this vulnerable group. “Young infants face significant risks, underscoring the need for targeted preventive measures,” she said.

“Since 2015, progress has stalled and, in some regions, reversed. This is a pivotal moment to rethink our strategies, leverage data, and tailor interventions to meet the needs of affected communities.” --Professor Moses Kamya

The day concluded with a celebration of excellence, as Dr Abel Kakuru was awarded the prestigious Post-Doctoral Fellowship Award for his contributions to malaria research. Dr Kakuru, joined by Professors Kamya and Grant Dorsey, took commemorative photos, marking a proud moment for IDRC and the entire malaria research community.

The 5th Malaria Research to Policy Dissemination Meeting underscored the critical role of research in shaping policy and driving impactful interventions. With knowledge sharing and partnerships at its core, the event strengthened the collective resolve to achieve a malaria free Uganda.



Presenters engage participants in a Q & A session at the 5th Malaria Research to Policy Meeting, promoting dialogue and knowledge exchange.



Dr Abel Kakuru poses with Executive Director Professor Moses Kamya after receiving the Postdoctoral Fellowship Award at the 5th Malaria Research to Policy Dissemination Meeting

SEARCH SAPPHIRE Stakeholder Meeting Unveils Promising HIV and Hypertension Prevention Strategies

On 11th October 2024, the SEARCH SAPPHIRE stakeholder engagement meeting brought together an array of health experts, researchers, and stakeholders to discuss the ongoing efforts and results of health initiatives in Uganda and beyond, sharing innovative insights and data on addressing HIV and non-communicable diseases (NCDs) in Uganda and across Sub-Saharan Africa. The meeting opened with welcoming remarks from Dr Alex Opio, Chair of the Scientific Advisory Board, who praised stakeholders' dedication, stating, "We look forward to any ideas as we set out to design Phase 3.0 of our study."

Professor Moses Kanya, Executive Director of the Infectious Diseases Research Collaboration (IDRC) and co-principal investigator for SEARCH SAPPHIRE, expressed gratitude for the collaborative spirit. He emphasised the meeting's goals: "We enjoy these meetings as a chance to share data locally, where it matters most, and to get your feedback." Professor Kanya highlighted SEARCH's "dynamic choice" model, a community-centred, multi-disease approach designed to empower patients to make informed choices regarding HIV prevention services.

Professor Diane Havlir, the UCSF Principal Investigator for SEARCH SAPPHIRE, provided an overview of the study, emphasising the importance of locally informed research to drive policy decisions. "SEARCH's goal is to test bold, population-level interventions to end AIDS and improve community health," she said, adding that the person-centred, multi-disease model has been instrumental in expanding access to HIV treatment and prevention.

Professor Maya Petersen, the UC Berkeley Principal Investigator of SEARCH SAPPHIRE, welcomed stakeholders and highlighted their feedback's importance in shaping the SEARCH collaboration's research agenda.



Participants at the SEARCH SAPPHIRE stakeholder engagement meeting pose for a group photo (photo above). Jane Kabami and Dr Alex Opio kick off discussions (photo below)



Professor Moses Kanya outlines the meeting goals during the SEARCH SAPPHIRE stakeholder engagement meeting, setting the stage for collaborative discussions.



Presentations from program manager Jane Kabami and principal investigator from UCB, Professor Maya Petersen, further explored findings from recent trials. Jane Kabami shared data on the dynamic choice model's success in increasing HIV prevention coverage, with the addition of injectable Cabotegravir (CAB-LA) as a new HIV prevention option. "No one-size-fits-all solution meets the prevention needs of our clients," she stated, emphasising the importance of patient choice. Professor Petersen discussed the long-term impacts of these interventions on HIV prevalence, explaining, "Adding CAB-LA to the Dynamic Choice HIV Prevention model profoundly reduces HIV prevalence and has a long-term cost-effectiveness potential compared to Dynamic Choice HIV prevention without CAB-LA."

Dr. Elijah Kakande presented the study's hypertension telehealth intervention, which showed promising results in blood pressure control. "We reduced population-level uncontrolled hypertension by 59%," he noted, underscoring the scalability and success of community-based hypertension screening and treatment with the involvement of community health workers.

The meeting's Q&A session fostered dialogue on real-world application, with participants raising questions about adherence, stigma, and accessibility of Dynamic choice prevention with CAB-LA. Jane Kabami addressed these, affirming, "The patient-centred model supports participants based on their unique barriers, helping them remain consistent in their treatment."

Stakeholders also expressed enthusiasm about the community-based hypertension telehealth intervention, adding that it is aligned with national priorities and will inform policy.

Professors Kamya and Havlir's closing remarks underscored the meeting's productive exchange. Professor Havlir concluded, "We leave here inspired by the possibilities ahead and the collective commitment to transform community health."

Professor Kamya appreciated the collective efforts, stating, "The collaboration today has stimulated valuable thinking and laid the foundation for future progress."

The SEARCH SAPHIRE stakeholder meeting underscored the essential role of shared insights, community-centred strategies, and the ongoing dedication of health professionals and researchers. The collaborative environment fostered at the conference promises to translate into practical, sustainable healthcare solutions that respond to each community's unique needs, forging a path to better health outcomes in Uganda and beyond.



COMMUNITY HEALTH



Program Manager Jane Kabami (photo above) presented on adding the DPV Ring to HIV prevention on adding the DPV Ring to HIV prevention options. UCSF P.I Prof Diane Havlir (photo below) discussed the SEARCH SAPHIRE road map. UCB P.I Prof Maya Petersen, explored the cost-effectiveness of Dynamic Choice Prevention policies.



Dr Elijah Kakande delivers an insightful presentation on the SEARCH SAPHIRE Study's innovative hypertension telehealth intervention during the stakeholder engagement meeting.



UPCOMING EVENTS



IDRC PRESENTS

+ IDRC Malaria Strategy Meeting

Aligning Efforts in a Rapidly Evolving Malaria Research Landscape

13th January, 2025

8:30 am - 5:00 pm



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